

Amendments to the Claims:

1-20 (Cancelled)

21. (Currently Amended) A wet and dry weather water disinfection system for reducing ~~pollutants~~ harmful pathogens in ~~storm~~ water runoff comprising:

a storm water management infrastructure comprising a storm sewer comprising an inlet to accept water runoff and flowingly coupled to a receiving body of water;

a disinfecting chemical dispenser located in-line to said [[a]] storm water management infrastructure where said disinfecting chemical dispenser is configured to add a disinfectant chemical into ~~storm~~ water flowing through said storm water management infrastructure, said disinfectant chemical capable of reducing harmful pathogens in said water;

a sensor configured to measure ~~storm~~ water pollution characteristics attributable to said water flowing through said storm water management infrastructure;

a means to measure water flow rate attributable to said water flowing through said storm water management infrastructure; and

a control unit that controls an amount of said disinfectant chemical added to said water flowing through said storm water management infrastructure based on said water pollution characteristics said flow rate through said storm water management infrastructure as determined by said flow rate measurement means.

22. - 53. (Cancelled).

54. (Previously Presented) The wet and dry weather water disinfection system of claim 21 wherein said sensor to measure water pollution characteristics is located upstream of said disinfecting chemical dispenser.

55. (Previously Presented) The wet and dry weather water disinfection system of claim 21 further comprising a downstream sensor configured to measure said water pollution characteristics.

56. – 59. (Cancelled)

60. (Currently Amended) A method for ~~storm~~ water disinfection, comprising the steps of: placing a portable disinfecting chemical dispenser adjacent to a storm drain ~~collection location inlet~~, said disinfecting chemical dispenser configured to add a disinfection chemical into ~~storm~~ water flowing through said storm drain collection location, said disinfection chemical capable of reducing harmful pathogens in said water; measuring ~~water pollution characteristics flow rate~~ attributable to said water flowing through said storm drain ~~collection location inlet~~ using at least one ~~sensor measuring means~~; determining an amount of disinfection chemical to add to said water flowing through said storm drain ~~collection location inlet~~ based on said ~~water characteristics flow rate~~ by a controller connected to said portable disinfecting chemical dispenser; and adding said determined amount of said disinfection chemical from said portable disinfecting chemical dispenser to said water flowing through said storm drain.

61. (Currently Amended) An automated in-line storm water disinfection system for reducing ~~pollutants~~ harmful pathogens in wet and dry weather ~~storm~~-water runoff comprising:

a monitor for measuring flow rate of ~~storm~~ water runoff through a storm water management infrastructure, whereby said flow rate can be measured for both wet and dry weather storm water runoff;

a means for disinfecting said ~~storm~~ water runoff;

a control unit located in-line to [[a]] said storm water management infrastructure and electrically coupled to said flow rate monitor, ~~said control unit electrically coupled to and~~ said disinfecting means, and capable of causing said disinfecting means to dispense ~~dispensing~~ disinfectant into said ~~storm~~ water runoff in a dosage adjusted for said measured flow rate, for purposes of reducing harmful pathogens in said water runoff whereby said flow rate may be measured for both wet and dry weather ~~storm~~ water runoff; and

at least one sensor coupled to said control unit for measuring water pollution characteristics attributable to said ~~storm~~ water runoff.

62. (Previously Presented) The system of claim 61 wherein said disinfecting system comprises a mixing chamber.

63. (Currently Amended) The system of claim 62 wherein said mixing chamber comprises a bypass unit for disinfection of ~~storm~~ water runoff during dry weather flow rate conditions.

64. (Previously Presented) The system of claim 61 wherein said water disinfecting means is a chemical dispenser.

65. (Currently Amended) The system of claim 61 wherein said water disinfecting means is a UV source; and wherein said at least one sensor is a UV spectrometer interfaced to said ~~storm~~ water runoff via a fiber optic cable.

66. (Currently Amended) The system of claim 61 wherein said control unit adjusts said water disinfecting means automatically based on physiochemical properties of said ~~storm~~ water runoff as measured by said at least one sensor.

67. (Currently Amended) The system of claim 61 wherein said control unit adjusts said water disinfecting automatically based on biological properties of said ~~storm~~ water runoff as measured by said at least one sensor.

68. (Currently Amended) The system of claim 61 wherein said control unit adjusts said water disinfecting automatically based on hydraulic properties of said ~~storm~~ water runoff as measured by said at least one sensor.

69. (Currently Amended) The system of claim 61 wherein said at least one sensor is upstream of said disinfecting means to measure pre-treatment characteristics of said ~~storm~~ water runoff.

70. (Currently Amended) The system of claim 61 wherein said at least one sensor is downstream of said disinfecting means to measure post-treatment characteristics of said ~~storm~~ water runoff.

71. (Currently Amended) The system of claim 61 wherein said at least one sensor measures physiochemical properties of said ~~storm~~ water runoff[;].

72. (Currently Amended) The system of claim 61 wherein said at least one sensor measures biological properties of said ~~storm~~ water runoff.

73. (Previously Presented) The system of claim 61 wherein the at least one sensor is a sensor array.

74. (Previously Presented) The system of claim 73 wherein said sensor array is a meteorological station coupled to said control unit via a communications link.

75. (Previously Presented) The system of claim 74 wherein said meteorological sensor array provides dynamic data for adjusting the parameters of said control unit.

76. (Currently Amended) An automated in-line wet and dry weather water flow disinfection system for disinfecting storm water runoff comprising:

an in-line flow rate monitor for measuring flow rate of ~~storm~~ water runoff through a storm water management infrastructure;

a chemical dispenser for dispensing at least one disinfectant chemical into ~~a mixing chamber whereby said chemical disinfectant is mixed with~~ said water runoff;

a control unit located in-line to said storm water management infrastructure and electrically coupled to said flow rate monitor, said control unit further coupled to said chemical dispenser and capable of controlling the amount of said chemical disinfectant applied to said ~~storm~~ water runoff;

said control unit further capable of automatically determining a dosage level of said chemical disinfectant based on said flow rate;

at least one upstream sensor coupled to said control unit to provide feedback to said control unit regarding pre-treatment biological properties of said ~~storm~~ water runoff; and

at least one downstream sensor coupled to said control unit to provide feedback to said control unit as to post-treatment biological properties of said disinfected ~~storm~~ water runoff.

77. (Previously Presented) The automated in-line wet and dry weather water flow disinfection system of claim 76 wherein said biologic properties further comprise the concentration of pathogenic microorganisms.

78. (New) A wet and dry weather water disinfection system for reducing harmful pathogens in urban water runoff comprising:

a storm water management infrastructure comprising an urban street storm sewer comprising an inlet to accept water runoff and flowingly coupled to a receiving body of water;

a disinfecting chemical dispenser located in-line to said storm water management infrastructure, where said disinfecting chemical dispenser is configured to add a

disinfectant chemical into said urban water runoff flowing through said storm water management infrastructure, said disinfectant chemical capable of reducing harmful pathogens in said urban water runoff;
a sensor to measure urban water runoff flow rate attributable to said urban water runoff flowing through said storm water management infrastructure; and a control unit that controls an amount of said disinfectant chemical added to said urban water runoff flowing through said storm water management infrastructure based on said flow rate through said storm water management infrastructure as determined by said flow rate measurement means.